

# EVERGREEN® 23XRV Variable Speed Screw Chillers



Turn to the Experts.™





Introducing Carrier's Evergreen® 23XRV — the world's first water-cooled variable speed screw chiller. The Evergreen 23XRV combines the reliability of a screw compressor with the energy savings of a variable frequency drive (VFD). This simple, reliable combination achieves ultra-high efficiency levels while lowering the cost of ownership.

The Evergreen 23XRV's overall efficiency is superior to other constant and variable speed chillers on the market today because only the 23XRV has the ability to maximize efficiency at all operating conditions. The 23XRV has an unparalleled operational envelope that permits the chiller to operate under adverse and ever changing real-world conditions, while maintaining peak efficiency levels.

As with all of Carrier's Evergreen family of chillers, the 23XRV enables chiller plants to achieve superior efficiencies at true operating conditions without compromising the environment. With environmentally sound refrigerant, superior efficiency, and powerful controls, these units are ideal for both new construction and replacement projects.

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## The Right Choice for Today and Tomorrow

### Reliability

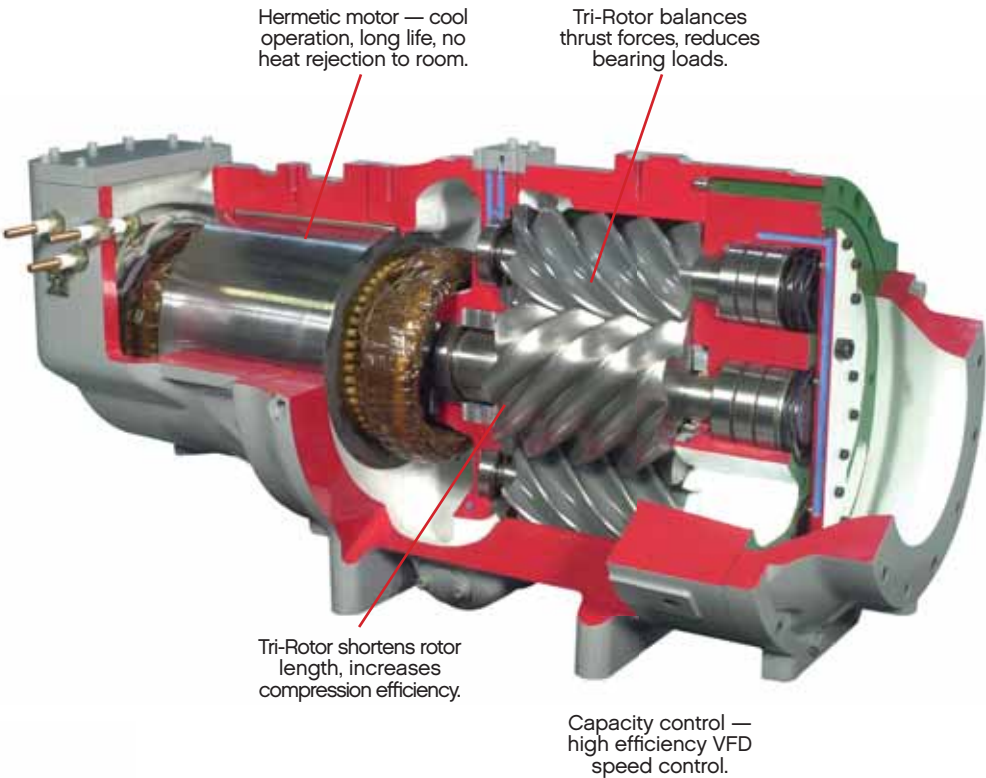
Evergreen 23XRV's simple, yet innovative tri-rotor compressor design reduces the number of moving parts, uses less lubricating oil, and eliminates the slide valve. In addition, Evergreen chillers are equipped with sturdy heat exchangers that are constructed to meet the stringent requirements of ASME code. Carrier's hermetic motors operate in a clean refrigerant-cooled environment and are not exposed to the hot, dirty air that may be present in the mechanical room. The hermetic design eliminates the potential for shaft seal leaks and refrigerant/oil loss.

### Efficiency

The 23XRV variable speed screw chiller has the ability to reduce speed and optimize operation independent of ambient conditions. This unique capability permits the chiller to precisely match building load and conserve energy.



### Next Generation Screw Compressor



### Evergreen Advantage

Since the variable speed drive that is utilized for the 23XRV is IEEE-519 compliant, field-installed harmonic filters or harmonic study of the building's electrical system will not be required. The integrated variable speed drive provides a soft start, further reducing stress on the compressor and inrush current at start-up.

Evergreen chillers can be shipped fully charged with refrigerant from the factory, minimizing the time required for start-up. The ability to store the entire refrigerant charge inside the chiller reduces maintenance time. Because of the Evergreen chiller's positive pressure design, air and other contaminants do not enter the chiller; purge units are not required as efficiency is maintained throughout the life of the chiller. The tight construction of Evergreen chillers enables Carrier to offer the industry's best refrigerant warranty.



### Environmental Leadership

Carrier has long been committed to the environment and its sustainability. Evergreen chillers provide our customers with a high-efficiency, chlorine-free, long-term solution unaffected by refrigerant phase-out. Carrier's decision to utilize non-ozone-depleting HFC-134a refrigerant provides our customers with a safe and environmentally sound choice without compromising efficiency.

### The Right Level of Control

All Carrier Evergreen chillers come fully equipped with simple-to-use onboard controls, allowing users to easily monitor over 125 operating and diagnostic conditions in several languages. A chilled-water control system that supervises and optimizes the operation of your chilled-water plant can also be provided. Carrier Comfort Network® (CCN) has the ability to control and maximize energy efficiency for all elements of the heating, ventilation, and air conditioning (HVAC) system.

For all your comfort needs, Carrier has the right level of control.

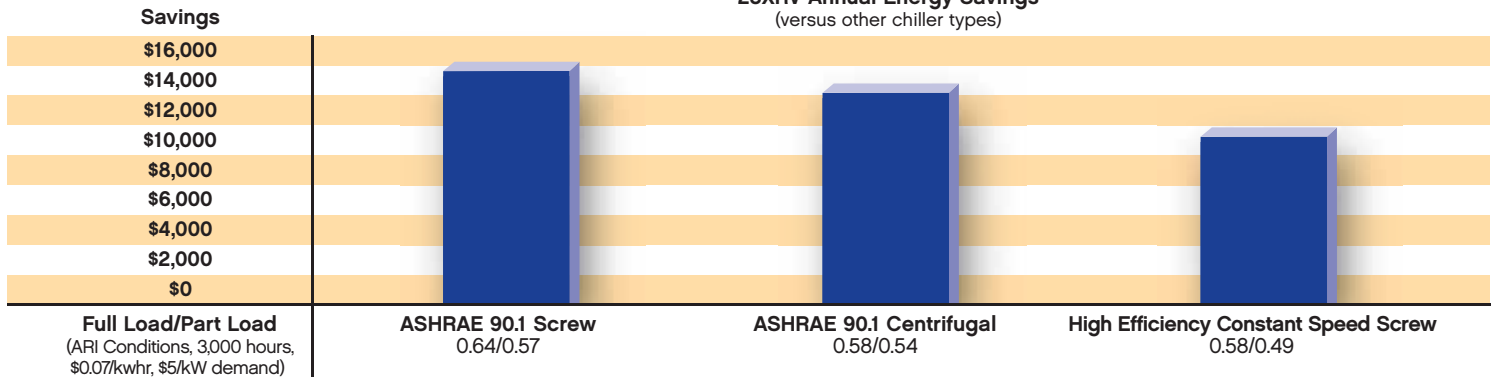


HFC-134a



23XRV  
■ HFC-134a  
■ 300 to 550 tons

**23XRV Annual Energy Savings**  
(versus other chiller types)



## Peace of Mind

Carrier's 19/23 series Evergreen centrifugal chillers are provided with a 0.1% leak-proof warranty.\* Carrier provides coverage against refrigerant leaks for the first five years of ownership. For customers who have a service agreement with Carrier Commercial Service, Carrier will extend the warranty for the life of the chiller.

\* For U.S. and Canada only. Warranty is not available in all other markets.

## Benefits at a Glance

### For Building Owners & Managers

- Reduced operating expenses
- Easy to maintain
- Quiet operation
- Reliable operation
- Environmentally sound refrigerant

### For Consulting Engineers

- Exceeds ASHRAE 90.1
- ARI certified
- HFC refrigerant
- High efficiency optimization
- Ideal for replacement projects

### For Contractors

- Easy to break down
- Diagnostic controls
- Reliable performance
- Reduced installation expenses

## Turn to the Experts

Whatever your HVAC needs, from specifying and purchasing to installation and maintenance, Carrier has the solution. As the world leader in heating, ventilation, and air conditioning, Carrier is committed to continually improving the quality of comfort for our customers.

From concept to finished product, your local Carrier sales representatives walk with you every step of the way. Whether you have one building, multiple sites nationwide, or special equipment and facility requirements, Carrier sales representatives will recommend a solution that fits your scope and budget.



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